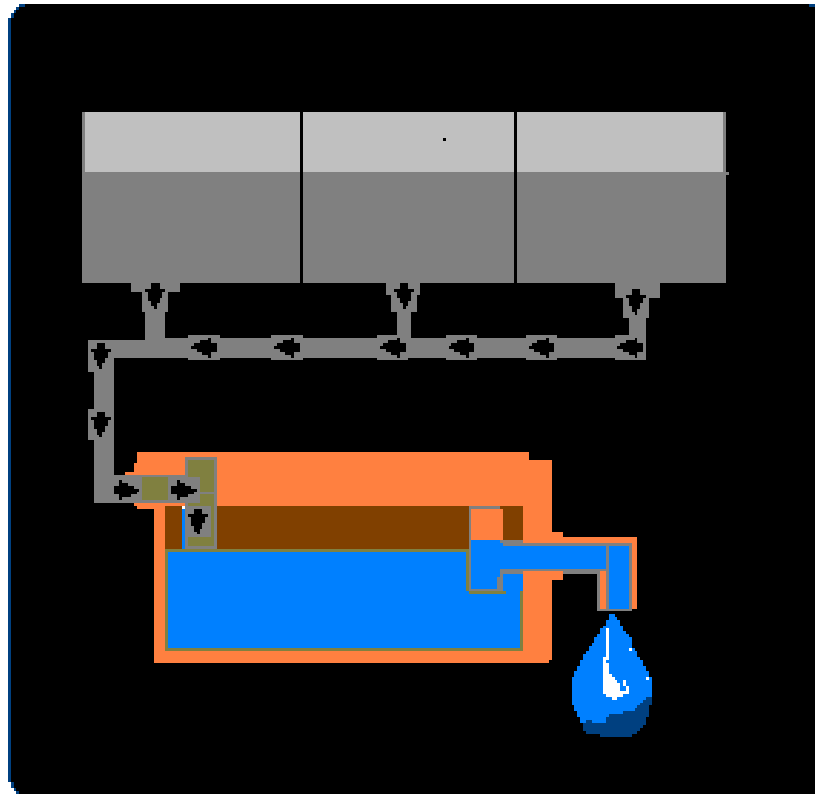


GREASE TRAPS AND INTERCEPTORS
WHO NEEDS THEM
AND
HOW THEY WORK

Future Solutions Now



Industrial Waste Monitoring

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GREASE TRAP OR INTERCEPTOR? WHAT'S THE DIFFERENCE?

Grease traps and interceptors both remove grease from the wastewater stream. Traps are usually smaller in size and many are found inside food service facilities. Interceptors on the other hand, are larger and normally found outside the facility, below grade (ground level).

The terms, trap and interceptor are often used interchangeably with clarifiers and separators. Although there are similarities in term, there is a distinction made by the Uniform Plumbing Code ("UPC®") and the Plumbing and Drainage Institute ("PDI"). UPC® says that a grease trap is a separation device that has a flow rate of 55-gallons per minute ("gpm") or less. They go on to state that a grease interceptor is a separation device that has a flow rate greater than 55-gpm or is connected to more than four fixtures. PDI's definition is a bit different in that they state that a grease interceptor has a flow rate between 4 and 50-gpm. UPC's term will be used in this discussion.



The hauler discharges the grease-load into a converted grit process tank, where bacteria cultures or enzymes are added to the grease for biological break-down.



The grease-water-bacteria mixture is aerated, pH and temperature controlled then retained for a set period of time to allow the bacteria to breakdown the grease to solids and water solution. The reduced stream is then trickled into the normal wastewater stream for further biological processing.



WHERE DOES MY GREASE GO?

After the vendor pumps and cleans out your interceptor they can bring it to a special process area of the City of Flagstaff's Wildcat Hill Wastewater Treatment Facility. The plant is located on the East Side of town behind the Flagstaff Mall, just off of old Route 66.

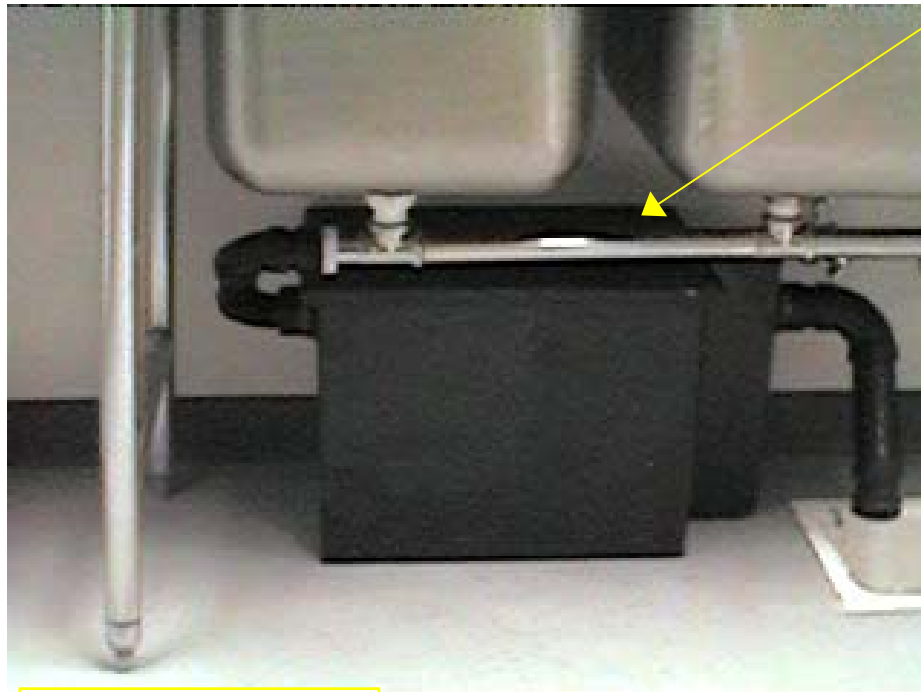


A City permitted hydro-vac, septic-hauler, or grease scavenger will collect grease from a number of grease interceptors around town and bring its load to the primary area of the Wildcat Hill Wastewater Treatment Plant.



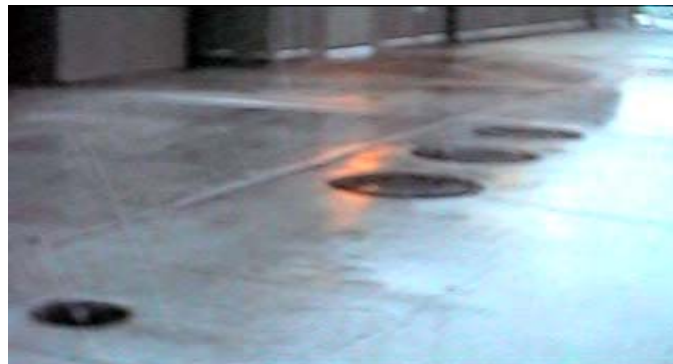
WHAT YOU SHOULD KNOW

Grease traps and interceptors come in different sizes and may be located inside or outside the facility. Traps can be installed under sinks or in the floor immediately downstream of the grease-producing fixture it services, if there is adequate access for maintenance. Grease traps are not to be installed in the food preparation area.

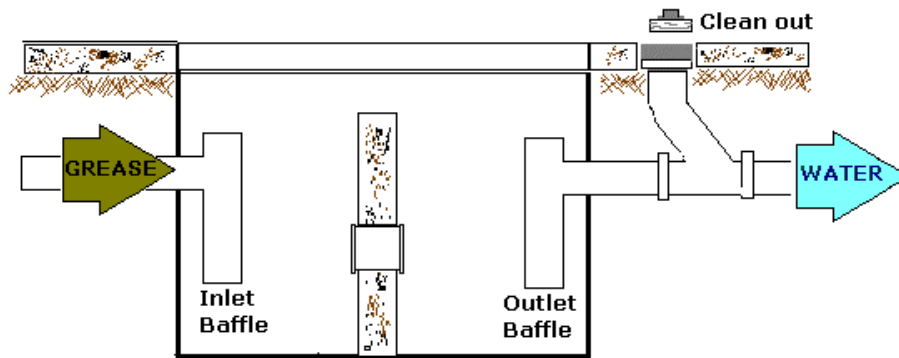


This trap was improperly installed in the Food prep area of the Kitchen.

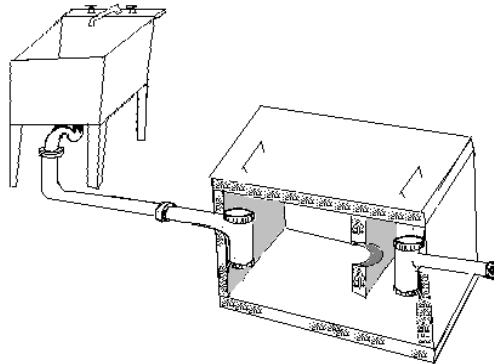
- Larger interceptors, typically located outside are usually installed below ground. All types of devices are to be easily accessible for cleaning and service



HOW GREASE TRAPS WORK



A grease trap works by flotation and sedimentation. The waste stream of hot greasy water is slowed down by the inlet flow control and allowed to cool within the first compartment. As the hot water cools, the grease and oil separate and float to the top of the compartment.



Larger, heavier food particles and grit, like coffee grounds sink to the bottom of the compartment. The cooler water continues to flow into the second and subsequent compartments repeating the flotation and sedimentation process until the cooled waste stream flow out of the trap and down the pipe to the sewer. Grease is actually trapped by “baffles” which cover the inlet and outlet of the tank, preventing grease from flowing out of the trap.

For this process to work, traps must be sized to produce correct retention time based on your particular wastewater flow rates. For traps, a vented flow-control device has to be installed and adjusted properly. Consistent with UPC® requirements, all traps must be properly vented.

**GOOD KITCHEN CLEANING PROCEDURES
INCLUDE THAT CUT GREASE TRAP
MAINTENANCE INCLUDE:**

✂ Scraping plates into a garbage can to remove as much food waste as possible.

✂ Prewashing dishes into a sink with a catch basket over the drain. The catch basket should be cleaned out over a garbage can.

✂ Pouring all liquid grease and oil from pots and pans into a waste grease bucket stored at the pot washing sink and then scraping out solidified grease if present.

✂ Cleaning fryerlators with a rubber spatula to squeegee down the sides while grease and oil are still warm.

Several companies collect 'food' grade fat fryer grease for rendering from Flagstaff businesses. The oils are collected and stored in bins like the one shown below.



CLEANING INTERCEPTORS

It is necessary to clean your trap regularly based on the amount of grease collected and the total capacity of the device. All traps are designed to hold a set volume of grease. This volume is referred to as the interceptor's "capacity." Once the trap has reached its capacity for holding grease additional grease cannot be stored and is passed through the device into the sewer system. This could result in a blockage in the sewer. The cost of clean up of sewer blockages that can be attributed to improper maintenance can be charged back to the discharger.

Clean out procedures should be made as convenient as possible for employees. The facility operator should frequently inspect their grease interceptor area for cleanliness. Frequent cleaning will help to eliminate the odors generated by long term storage of grease within the trap.

The larger interceptors can only be cleaned by pumping, due to their large volume. There are several local vendors that will assist in pumping and maintaining larger interceptors.

Kitchen cleanup procedures

Kitchen cleanup procedures can greatly reduce the amount of grease that enters your trap. The less grease that enters your kitchen drains, the less grease that needs to be cleaned out of the trap. Food grade bins are supplied by several vendors to recycle deep-fat fryer grease.

Grease Traps / Interceptors,

WHO NEEDS THEM?

The City of Flagstaff's Industrial Waste Monitoring Division inspects all businesses in Flagstaff as part of its Pretreatment requirements of the National Pollution Discharge Elimination System. Through these inspections and identification of types of service, the need for grease capture and removal is identified appropriate to the specific establishments.

As an owner or operator of a food preparation establishment, it is important to know that improperly maintained grease traps and interceptors can result in unsanitary conditions, plugged drains and sewers.

Restaurant grease traps are sized depending on the type of foods served and more importantly the type of ware washing utilized.

A Grease Trap or Interceptor? Traps are usually smaller and installed inside the premises. They slow the flow of grease on a baffle and capture it as floating material. Some of the heavier material sinks to the bottom. This sediment needs to be cleaned out frequently. **The City's minimum size grease trap is a forty-pound device.**

Grease interceptors can range from several hundred gallons to several thousand gallons. Larger units are normally underground and outside the facility, these larger units are most often comprised of several compartments and discharge directly to the City's wastewater collection system. Sometimes, both grease traps and grease interceptors are used in in-line applications.